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Students' Self-Determination About Studies and ItsEffectiveness Form Their Learning Level

Gul Rukh
Ph. D. Scholar Department of Education, Minhaj University, Lahore

Dr. Shafqat Ali
Associate Professor, Department of Education, Minhaj University, Lahore
drshafqat.edu@mul.edu.pk

Dr. Syed Shafqat Ali Shah
Associate Professor/HOD, Department of Education, Superior University, City Campus Lahore
Shafqat.ali@superior.edu.pk

Abstract

Motivation tends to a substitute significance in its relative power and self-determination motivation depicts the human's natural desire to recollect different parts for the instructive experience. To see the effectiveness of self-determination motivation for the learning process of students a quantitative study conducted. For this purpose, a null hypothesis "There is no effect of self-determination on students' achievement at secondary level" was developed. Sample of 400 students was selected randomly. A five-point likert scale was used for data collection. Results depicted significant difference among the different self-determination motivation level on learning achievement in science subjects.Facts also highlighted significant difference with values (f=15.772, Sig. =0.000) among students having different self-determination motivation level on learning achievement of students. According to given values the difference among students is significant with different Self-Determination level on learning achievement of students. So, it was suggested that policy makers should incorporate material in curriculum to boost the self- determination among students and in teachers also for better academic success.

Keywords: *Self-Determination, Students' Achievement, Secondary Level.*

1. Introduction

A student's quality and mastery talents might be greatly enhanced by consolation from parents and professors. In terms of reflection or mental growth, people fall short of their potential. Instead of continuing with the flow of remembering, inspiration influenceshow someone focuses on certain details and attempts to understand new knowledge through interactions, contemplations, thoughts, and faculties.

On the off chance that they respect or appreciate what they are doing, with or without your honour or support, students will be motivated inside. Even though studentsget very upset if they don't like what they are doing, they still do it to earn points or rewards. As internal motivation benefits students in the

long run, teachers usually promote it.

Other strategies to boost internal inspiration include encouraging their preferences, shaping their interests, assisting them in setting goals, and ensuring that theyare truly progressing along the cycle. Despite inner motivation, additional inspiration may also be beneficial. It can be exceedingly challenging to give someone the resources they require to deal with moral difficulties. But that shouldn't stop us from trying to alter their negativeattitudes and behaviors. An effective strategy to handle arrangements is to encourage folks to appreciate the advantages of the task and its advantages. They should be taughtand given the proper punishment so that they are aware of their limitations.

One review found that students' enthusiasm to find new abilities or learn how tostudy may fluctuate at times or encounter particular obstacles. So, those who are not eligible for undergrad need assistance from others, particularly by providing them withconcrete benefits and rewards for accomplishing the goal (Cherry, 2021).

Like their most impactful teachers, guardians must put up extraordinary effort andperseverance to support their kids in their academic endeavors. When they need help making a difference, they should have the option to focus on assisting their children rather than ignoring their needs. But teachers need to be aware that pupils can come from different racial, ethnic, and social backgrounds. They should keep in mind this obvious distinction while still developing a strong bond among all of them. This suggeststhat motivating each student may be a simple task.

Assessing the interests and abilities of students is of utmost importance to enable parents, guardians, and educators to provide the most effective support. Identifying their passions, talents, and potential will help them focus on activities where they can truly excel, reducing any feelings of frustration that might arise from tasks they have little enthusiasm for. Such discouragement could lead to a belief that they can never achieve their goals. Therefore, it is crucial to gain insight into their strengths and weaknesses in order to create strategies for motivating them effectively, as emphasized by Siyuan et al. in 2020.

Students are helped in many ways, particularly when it comes to learning and academic advancement. On the off chance that one student would benefit from engaging in a lesson or conversation while another might benefit more from independent study or atranquil setting like a library. All things considered, some people may be more enthusiastic about extracurricular activities, volunteering, or athletics (Ulster, et. al, 2017).

Today's pupils might be legitimately inspired by someone who can influence theirmotivation to learn, their ability to adapt, and their attitude by adhering to a predetermined aim. So, in order to support and encourage pupils in their chosen endeavors, parents and teachers must have the right attitude. According to studies, those who serve as role models for others to imitate and be inspired by provide them valuable lessons that enable them to move forward and be suitably led (Deci and Ryan 2000).

Self-Determination Theory (SDT) makes from characteristic and incidental rousing powers (Coccia, 2019). Of course, outward motivation tends to a substitute significance in its relative power, while trademark motivation depicts the human's naturaldesire to recollect different parts for the instructive experience. As needs be, it can reflecteither outside control or veritable self-rule.

Pretty much, freedom is associated with picking and opportunity (Gopalan et al.,2017), expertise is

associated with the impression of making progress and sure about pursuing and completing an obligation, and relatedness is associated with the experienceof being secured and related in a learning environment. The environment referred to above can help students with chipping away at their insightful execution and motivation. Close to that, there are five sub-theories to the confidence speculation. To begin, the Psychological Evaluation Speculation is a psychological theory that plans to figure out what outside results mean for inside motivation (Ross et al., 2016). This underlines the meaning of freedom and capacities in propelling trademark motivation, which is fundamental in preparing, human articulation, sports, and various fields.

For data collection a five-point rating scale was used to know the self-determination level of students, and their annual examination marks was taken to compare the learning level of students having different self-determination. The analysisas per SPSS is given in the tables below:

Table 1.

Analysis of Variance (ANOVA) Examining the Impact of Self-Determination Motivation on Students' Learning in Science Subjects

Groups	Sum of S.	d.f.	Mean. S.	*f*	*p.*
Between	3826.286	2	1913.143	15.157	.000
Within	49226.676	390	126.222		
Total	53052.962	392			

Self-determination motivation was categorized into three groups: Low self-determination motivation (scores ranging from 0 to 1.5), Moderate self-determination motivation (scores between 1.51 and 2.50), and High self-determination motivation (scores between 2.51 and 4).

The table 1 showed results of ANOVA among different self-determination motivation levels and achievement of students in science subjects. The findings ($F = 15.157$, $p = 0.000$) indicate a noteworthy variation in learning achievement in science subjects across various levels of self-determination motivation. Therefore, null hypothesis “There is no effect of self-determination on students’ achievement at secondary level” was rejected.

Table 2.

Impact of Self-Determination Motivation on Students' Learning Achievement in Science Subjects.

Self Determination	Students	N	S. D.	Mean. D	*Sig.*
Low	5	46.000	4.430	10.609	.106

1	Moderate	64	35.391	11.172		
2	Low	5	46.000	4.430	2.219	.900
	High	324	43.781	11.316		
	High	324	43.781	11.316	8.390*	.000
3	Moderate	64	35.391	11.172		

The table 2 showed mutual comparison of different self-determination motivation levels and learning achievement in science subjects. Table indicated that low self-determination motivation level (*M=46.000, SD=4.430*) was insignificantly better from moderate self- determination (*M=35.391, SD=11.172*) having *p* value .387. Low self- determination motivation (*M=46.000, SD=4.430*) was insignificantly different from High self-determination motivation level (*M=43.781, SD=11.316*) having *p* value .900. Moderate self-determination motivation level (*M=35.391, SD=11.172*) differed significantly from High self-determination motivation level (*M=43.781, SD=11.316*) as having *p* value .000.

Table 3.

Analysis of Variance (ANOVA) Examining the Impact of Self-Determination Motivation on Students' Learning

Groups	Sum of S.	d.f.	Mean. S.	*f*	*p.*
Between	265715.308	2	132857.654	15.772	.000
Within	3285303.384	390	8423.855		
Total	3551018.692	392			

A One-way between-groups analysis of variance was performed to investigate how different levels of self-determination motivation in teaching affect students' learning achievement. The self-determination motivation factor was categorized into three groups: Low self-determination motivation (0-1.5), Moderate self-determination motivation (1.51-2.50), and High self-determination motivation (2.51-4).

Above table 3 showed results of ANOVA among different self-determination motivation levels and learning achievement of students. Table highlighted significant difference withvalues *(f=15.772, Sig. =0.000)* among students having different self-determination motivation level on learning achievement of students. Therefore, the null hypothesis "There is no effect of self-determination on students' achievement at secondary level" wasrejected.

Table 4.

Impact of Self-Determination Motivation on Students' Learning Achievement

Self Determination	Students	M	S. D.	Mean D.	*Sig.*
Low	5	435.000	.0000	117.19*	.008
Moderate	64	307.078	105.8166		
Low	5	435.000	.0000	60.58	.306
High	324	374.114	89.3714		
High	324	374.114	89.3714	67.61*	.000
Moderate	64	307.078	105.8166		

Further analysis was done to find out position of different self- determination motivation levels and learning achievement of students.

Table 4 showed mutual comparison of different self-determination motivation levels and learning achievement of students showed that low self-determination motivation level (*M=435.000, SD=0.000*) was highly different as compared to moderate self-determination (*M=307.078, SD=105.816*) having *p* value .008 and was also insignificantly different from High self-determination motivation level (*M=374.114, SD=89.371*) having *p* value .306. Moderate self-determination motivation level (*M=307.078, SD=105.816*) differed significantly from High self-determination motivation level (*M=374.114, SD=89.371*) as having *p* value .00.

Table 5.

Analysis of Variance (ANOVA) Examining the Impact of Self-Determination Motivation on Students' Learning in Science Subjects Among Male Students

Groups	Sum of S.	d.f.	Mean. S.	*f*	*p.*
Between	132.007	2	66.004	.465	.629
Within	18034.885	127	142.007		
Total	18166.892	129			

A One-way between-groups analysis of variance was carried out to investigate the influence of self-determination levels in the domain of teaching on the academic performance of male students in science subjects. Self-Determination was divided into three groups; Low Self-Determination (0- 1.5), Moderate

Self-Determination (1.51-2.50) and High Self-Determination (2.51-4).

The table 5 showed results of ANOVA among different Self-Determination levels and achievement in science subjects of male students. Insignificant difference with values *(f=0.465, Sig. =0.629)* among students having different Self-Determination level.

Table 6.

Impact of Self-Determination Motivation on Students' Learning Achievement in Science Subjects of Male Students

	Self- Determination	Students	M	S. D.	Mean D.	*Sig.*
1	Low	5	37.400	15.662	2.659	.891
	Moderate	27	34.741	11.356		
2	Low	5	37.400	15.662	.186	.999
	High	98	37.214	11.884		
3	High	98	37.214	11.884	-2.473	.607
	Moderate	27	34.741	11.356		

The table 6 showed mutual comparison of different self-determination levels and learningachievement of male students in science subjects showed that low self-determination level(*M=37.400, SD=15.662*) was insignificantly different from moderate self-determination level (*M=34.741, SD=11.356*) having *p* value .891 and was insignificantly different from High self-determination level (*M=37.214, SD=11.884)* having *p* value .999.Moderate self-determination level (*M=34.741, SD=11.356*) was insignificantly differ from High self- determination level (*M=37.214, SD=11.884*) as having *p* value .607.

Table 7.

Analysis of Variance (ANOVA) Examining the Impact of Self-Determination Motivation on Students' Learning among Male Students

Groups	Sum of S.	d.f.	Mean. S.	*f*	*p.*
Between	29540.305	2	14770.152	1.498	.228
Within	1252407.426	127	9861.476		

Total	1281947.731	129

An analysis of variance (ANOVA) with a One-way between-groups design was employed to examine how the level of self-determination in teaching affects the academic performance of male students. Self- Determination was divided into three groups; Low Self-Determination (0-1.5), Moderate Self-Determination (1.51-2.50) and High Self-Determination (2.51-4).

The table 7 showed results of ANOVA among different Self-Determination levels and achievement of male students. Results *(f=1.498, Sig. =0.228)* depicted insignificantdifference among students having different Self-Determination level on learning achievement of male students.

Table 8.

Impact of Self-Determination Motivation on Students' Learning Achievement of Male Students

	Self-Determination	Students	M	S. D.	Mean D.	*Sig.*
1	Low	5	361.200	136.977		
					55.978	.481
	Moderate	27	305.222	120.676		
2	Low	5	361.200	136.977		
					21.220	.887
	High	98	339.980	90.743		
3	High	98	339.980	90.743		
					-34.757	.245
	Moderate	27	305.222	120.676		

Table showed impact of different self-determination of male students in science subjects, which indicated that there was insignificant difference between groups.

The table 8 showed mutual comparison of different self-determination levels and learningachievement of male students in science subjects showed that low self-determination level (*M=361.200, SD=136.977*) was insignificantly different from moderate self-determination level (*M=305.222, SD=120.676*) having *p* value .481 and was insignificantly different from High self-determination level (*M=339.980, SD=90.743)* having *p* value

. 887.Moderate self-determination level (*M=305.222, SD=120.676*) was insignificantly different from High self-determination level (*M=339.980, SD=90.743*) as having *p* value

.245.

Table 9.

Analysis of Variance (ANOVA) Examining the Impact of Self-Determination Motivation on Students' Learning in Science Subjects Among Female Students

Groups	Sum of S.	d.f.	Mean. S.	*f*	*p.*
Between	3684.753	2	1842.377	19.306	.000
Within	24811.985	260	95.431		
Total	28496.738	262			

A One-way between-groups analysis of variance was performed to investigate the influence of self-determination levels in teaching on the academic achievement of female students in the field of science subjects. Self-Determination was divided into three groups; Low Self-Determination (0- 1.5), Moderate Self-Determination (1.51-2.50) and High Self-Determination (2.51-4).

The table 9 showed results of ANOVA among different Self-Determination levels and achievement in science subjects of female students. Result values *(f=19.306, Sig. =0.000)* narrated significant difference among students having different Self-Determination level.

Table 10.

Impact of Self-Determination Motivation on Students' Learning Achievement of Female Students in Science Subject

	Self- Determination	Students	M.	S. D.	Mean D.	*Sig.*
1	Low	25	44.960	10.289		
					9.283*	.001
	Moderate	34	35.676	10.992		
2	Low	25	44.960	10.289		
					-1.957	.612
	High	204	46.917	9.490		
3	High	204	46.917	9.490		
					-11.240*	.000
	Moderate	34	35.676	10.992		

The table 10 showed mutual comparison of different self-determination levels and learningachievement

of male students in science subjects showed that low self-determination level(*M=44.960, SD=10.289*) was highly unlike as compared to moderate self-determination level (*M=35.676, SD=10.992*) having *p* value .001 and was insignificantly different from High self-determination level (*M=46.917, SD=9.490)* having *p* value .612.Moderate self- determination level (*M=35.676, SD=10.992*) was significantly differ from High self- determination level (*M=46.917, SD=9.490*) as having *p* value .000.

Table 11.

Analysis of Variance (ANOVA) Examining the Impact of Self-Determination Motivation on Students' Learning among Female Students

Groups	Sum of S.	d.f.	Mean. S.	*f*	*p.*
Between	192665.841	2	96332.921	13.204	.000
Within	1896937.155	260	7295.912		
Total	2089602.996	262			

An analysis of variance (ANOVA) with a One-way between-groups design was carried out to investigate the influence of self-determination levels in teaching on the academic performance of female students. Self- Determination was divided into three groups; Low Self-Determination (0-1.5), Moderate Self-Determination (1.51-2.50) and High Self-Determination (2.51-4).

The table 11 showed results of ANOVA among different Self-Determination levels and achievement of female students. According to given values *(f=13.204, Sig. =0.000)* difference among students is significant with different Self-Determination level on learningachievement of female students.

Table 12.

Impact of Self-Determination Motivation on Students' Learning Achievement of Female Students

	Self-Determination	Students	M.	S. D.	Mean D	*Sig.*
1	Low	25	382.880	83.835	73.909*	.003
	Moderate	34	308.971	93.770		
2	Low	25	382.880	83.835	-7.311	.914
	High	204	390.191	84.168		
3	High	204	390.191	84.168	-81.221*	.000
	Moderate	34	308.971	93.770		

The table 12 showed mutual comparison of different self-determination levels and learningachievement

of male students in science subjects showed that low self-determination level(*M=382.880, SD=83.835*) was significantly different from moderate self-determination level (*M=308.971, SD=93.770*) having *p* value .003 and was insignificantly different from High self-determination level (*M=390.191, SD=84.168)* having *p* value .914.Moderate self-determination level (*M=308.971, SD=93.770*) was significantly differ from High self-determination level (*M=390.191, SD=84.168*) as having *p* value .000.

2. Findings:

The objective of the data analysis was to investigate how varying levels of self-determination motivation influence students' academic performance in science subjects. The study divided self-determination motivation into three categories: low, moderate, and high. The findings revealed noteworthy distinctions among the various levels of self-determination motivation in terms of academic achievement in science subjects (see Table 1). Specifically, students withhigh self-determination motivation achieved significantly higher marks compared to those with moderate and low motivation levels. Further analysis (Table 2) revealed that low self-determination motivation was insignificantly different from moderate motivationbut significantly different from high motivation levels. Meanwhile, moderate motivation levels were insignificantly different from high motivation levels in terms of learning achievement.

The analysis of total marks (Table 3) confirmed that students with high self- determination motivation achieved significantly higher total marks compared to those with moderate motivation levels. However, there was no significant difference betweenlow self-determination and high self-determination groups in total marks. For male students (Table 5 and 6), self-determination levels did not significantly impact learningachievement in science subjects or total marks. On the other hand, for female students (Table 9 and 10), self-determination motivation significantly influenced learning achievement, with high motivation levels correlating with higher marks.

The findings highlight the significant positive influence of self-determination motivation on learning achievement in science subjects, especially for female students. Students with higher self-determination tend to perform better academically, indicating the importance of fostering and supporting students' self-determination in the educationalsetting. However, the study did not find significant gender-based differences in the impact of self-determination on learning achievement for male students. This suggests that other factors might play a more substantial role in determining academic performance for male students in science subjects.

The results suggest that educational institutions should implement interventions toenhance students' self-determination motivation, particularly for female students, to improve learning outcomes in science subjects. Additionally, further research is warranted to identify additional factors that may influence learning achievement among male students in science subjects to develop more tailored interventions for their academic success.

References

Cherry, K. (2021). *What Is Extrinsic Motivation?*. Retrieve from https://www.verywellmind.com/what-is-extrinsic-motivation-2795164. 05.02.2022

Coccia, M. (2019). Theories of Self- determination. In book: *Global Encyclopedia of Public*

Administration, Public Policy, and Governance. Springer International Publishing AG, part of Springer Nature. DOI:10.1007/978-3-319-31816-5_3710-1

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227–268.

Gopalan, V., Juliana, A., Zulkifli, A. N., Alwi, A., & Che, M. R. (2017). A review of the motivation theories in learning. *AIP Conference Proceedings.* 1891. 020043. 10.1063/1.5005376.

Millar, R. (2010). Analyzing practical science activities to assess and improve their effectiveness. *(ASE Journal), The Association of Science Education.* https://www.rsc.org/cpd/teachers/content/filerepository/frg/pdf/ResearchbyMillar.p df

Ross M., Perkins, H., & Bodey, K. (2016). Academic motivation and information literacyself-efficacy: The importance of a simple desire to know. *Library & Information Science Research, 38*(4), 2-9.

Siyuan, M., Jaehoon, R., & Jun, I. (2020). How Much Does Extrinsic Motivation orIntrinsic Motivation Affect Job Engagement or Turnover Intention? A Comparison Study in China. *Sustainability 12*(3), 1-18.

Suhag, A. K., Larik, R. S. A., Tagar, A. A., & Solangi, S. R. (2016). Student AcademicMotivation of Secondary Schools of Khaırpur Mır's, *Academic Research International,* 7(1), 100-109.

Ulster, S., Olav, H., Hallgeir, S. O., & Deci, E. (2017). Motivation, Learning Strategies, and Performance in Physical Education at Secondary School. *Advances in Physical Education, 6*(1), 27-38.

Zhu, Y., Leung, F. S. (2011). Motivation and achievement: Is there an East Asian model? *International Journal of Science and Mathematics Education,* 9, pp. 1189-121.